

RELATED DISCLOSURES

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14 February 1978

***** FLAVOR *****

**712 :T FLAVOR IMPROVEMENT OF RECONSTITUTED TOBACCO PRODUCTS/11-7-75
:I F. DAYLOR, D. KEEL, AND H. SPIELBERG
:C FLAVOR + RECONSTITUTED + ADDITIVE
:D R&D/FLAVOR DEVELOPMENT DIVISION/FLAVOR DEVELOPMENT GROUP/GANNON
:D DAYLOR
:A SPRAY DAP ON RL SHEET OR APPLY IN RECOMBINE LIQUOR.
:S WLKT (KOTHE)/GMJS/SEE ALSO PM 746; PRIORITY CASE; PRIOR ART
:S VERY CLOSE; 1-77 DISCLOSURE HANDED TO KOTHE; NO DRAFT RECEIVED
:S IN 6 REPORT INTERVALS
**742 :T TOBACCO-FLAVOR PRECURSORS/6-15-76
:I G. KERITSIS
:C FLAVOR + PYROLYSIS
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
:D MATERIALS/GANNON/BURNS
:A SMOKING MATERIALS IN GENERAL, WHETHER TOBACCO, RECONSTITUTED
:A TOBACCO, TOBACCO SUBSTITUTES, OR ARTIFICIAL SMOKING MATERIALS
:A ARE GIVEN ENHANCED SMOKE FLAVOR BY THE ADDITION OF CERTAIN NON-
:A VOLATILE MATERIALS WHICH PRODUCE THE FLAVORS ON PYROLYSIS.
:A THESE MATERIALS ARE CHITIN, CHITOSAN, GLUCOSAMINE, OR NATURAL
:A MATERIALS WHICH CONTAIN HIGH PROPORTIONS OF THESE COMPOUNDS.
:S WLKT (KOTHE)/GEI/6-3-77 DISCLOSURE SENT TO WLKT; 6-13-77
:S ADDITIONAL EXAMPLES SENT TO WLKT; NO DRAFT RECEIVED IN 3 REPORT
:S INTERVALS
**749 :T GLUCOSE ESTERS AS TOBACCO FLAVORANTS/9-9-76
:I E. RUNDBERG (NO LONGER HERE)
:C FLAVOR + RELEASE
:D R&D/CHEMICAL RESEARCH DIVISION/MECHANISMS FOR SMOKE FORMATION
:D OSDENE/JOHNSON
:A FLAVOR IMMOBILIZED UNTIL RELEASE ON BURNING.
:S SAH/AWAITING MORE INFORMATION FROM T. SANDERS
**768 :T TOBACCO FLAVOR-REACTION PRODUCTS/2-14-77
:I J. SWAIN AND F. CRAYTON
:C FLAVOR + SYNTHESIS
:D R&D/FLAVOR DEVELOPMENT DIVISION/FLAVOR DEVELOPMENT GROUP
:D GANNON/DAYLOR
:A REACTION PRODUCTS OF FRUCTOSE, AMMONIA, AND FATTY ACIDS TO FLAVOR
:A TOBACCO.
:S SAH/6-77 PRELIMINARY SEARCH COMPLETED ON PM DATA BASE; SOME PRIOR
:S ART FOUND; 2-8-78 COMPREHENSIVE SEARCH REQUESTED; AWAITING
:S EXAMPLES

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****787** :T USE OF PHENOLIC GLYCOSIDES AS FLAVORANTS IN TOBACCO/9-21-77
 :I E. SANDERS
 :C FLAVOR + RELEASE + SYNTHESIS
 :D R&D/CHEMICAL RESEARCH DIVISION/SYNTHESIS OF TOBACCO ADDITIVES
 :D OSDENE/JOHNSON
 :A PHENOLIC GLYCOSIDES USEFUL AS FLAVORANTS IN SMOKING MATERIALS
 :A ARE DISCLOSED. ON PYROLYSIS, THE PHENOL FLAVORANT IS RELEASED TO
 :A FLAVOR THE SMOKE. ADVANTAGEOUS IN THAT THE COMPOUNDS ARE
 :A ODORLESS AND REDUCE PACK AROMA.
 :S SAH
****801** :T AMINO ACID-SUGAR TOBACCO FLAVORANTS/11-16-77
 :I L. WU
 :C FLAVOR + SYNTHESIS
 :D R&D/FLAVOR DEVELOPMENT DIVISION/GANNON/DAYLOR
 :A THE REACTION OF SUGAR, ASPARAGINE, OTHER AMINO ACIDS, AND
 :A ALDEHYDES IN THE PRESENCE OF NH₄OH; THE REACTION CAN BE DONE
 :A WITH OR WITHOUT ADDED HEAT. THE RESULTING PRODUCT IS USED TO
 :A IMPROVE THE FLAVOR OF LOW DELIVERY AND RL CIGARETTES.
 :S SAH

***** FILTER *****

****743** :T IMPROVED FILTER FOR DILUTED CIGARETTES/6-18-76
 :I M. KELLEY, JR.
 :C FILTER + VENTILATED
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/NEW PRODUCT DEVELOPMENT
 :D GANNON/MEYER
 :A VENTILATION TUBE LEADS AIR TO CENTRAL PART OF FILTER.
 :S GEI/2-14-78 INACTIVATED
 :S DISCUSSION
****744** :T IMPROVED FLAVOR FROM LOW DELIVERY DILUTED CIGARETTES/7-6-76
 :I M. KELLEY, JR.
 :C FILTER + IMPACT + VENTILATED
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/NEW PRODUCT DEVELOPMENT
 :D GANNON/MEYER
 :A DISC BAFFLE DIVERTS SMOKE TO OUTER EDGE OF FILTER TO BETTER MIX
 :A WITH DILUTION AIR.
 :S GEI/9-8-76 SEARCH COMPLETED; RESULTS TO INVENTOR FOR REVIEW AND
 :S DISCUSSION; INTERVIEW WILL BEGIN APPLICATION PREPARATION
****769** :T METHOD FOR MAKING WRAPLESS CIGARETTE FILTERS/2-15-77
 :I W. NICHOLS AND D. LASLIE
 :C FILTER + METHOD
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/FILTER AND CIGARETTE
 :D PROCESS DEVELOPMENT/GANNON/BURNS
 :A MICROWAVE FORMING OF WRAPLESS PLUGS, AS IN PM 735, BUT WITH
 :A PLASTICIZER REPLACED BY SLIGHTLY VOLATILE "ACTIVATOR" SUCH AS
 :A GLYCOLS, GLYCEROL.
 :S WLKT/GMJS/APPLICATION BEING PREPARED; AWAITING FURTHER
 :S INFORMATION

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****785** :T IMPROVED DILUTION UNIFORMITY OF VENTED FILTER TIP CIGARETTES
 :T 8-16-77
 :I L. MEYER AND W. HOUCK, JR.
 :C FILTER + METHOD + WRAPLESS PLUG
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/BRAND DEVELOPMENT
 :D GANNON/MEYER
 :A WRAPLESS ACETATE FILTER PLUGS FOR BOTH VENTED AND UNVENTED
 :A FILTERS. FOR LATTER, GOAL IS SIMPLIFICATION OF MAKING.
 :S AIP/AWAITING FURTHER DISCLOSURE DETAILS
****786** :T FILTER MATERIAL/8-18-77
 :I G. KERITSIS
 :C FILTER + METHOD + FOAM OR EXTRUDATE
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A POROUS OR FOAM FILTER ROD IS EXTRUDED FROM DEFATTED PROTEIN.
 :A ALTERNATIVELY, PROTEIN FIBER TOW CAN BE EXTRUDED.
 :S GEI
****789** :T CONTROLLED DILUTION (CIGARETTES) USING STANDARD FILTER WRAP
 :T 10-11-77
 :I J. NAMESNY
 :C FILTER + VENTILATED
 :D R&D/ENGINEERING SERVICES DIVISION/DESIGN AND ASSEMBLY/THOMSON
 :D MUTTER
 :A ELECTROSTATICALLY PERFORATED TIPPING PAPER OVER A MECHANICALLY
 :A PERFORATED PLUG WRAP MADE WITH IMPERMEABLE PAPER, WHICH IS LESS
 :A EXPENSIVE THAN INHERENTLY PERMEABLE PLUG WRAP.
 :S GMJS/UNDER ADVISEMENT
****805** :T CONTROLLED DILUTION/11-15-77
 :I F. RESNIK
 :C FILTER + VENTILATED
 :D NEW YORK/MISCELLANEOUS
 :S GMJS/TESTING IN PROGRESS TO DEVELOP DATA FOR PATENT APPLICATION
****812** :T POROUS CIGARETTE FILTER RODS: PROCESS AND PRODUCTS/1-25-78
 :I G. KERITSIS
 :C FILTER + METHOD
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :S GEI

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***** EXPANSION *****

**636 :T FILLING POWER INCREASE OF SMOKING MATERIAL/3-26-74
 :I A. LENDVAY
 :C EXPANSION + OTHER CHEMICAL + STIFFENING
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A THROUGH INTERACTION WITH THE PECTINACEOUS MATERIALS OF TOBACCO
 :A SMOKING PRODUCTS, INCREASED FILLING POWER OR REDUCED BULK
 :A DENSITY IS ACCOMPLISHED, IN ACCORDANCE WITH THE PRESENT
 :A INVENTION, BY MEANS OF THE APPLICATION TO THE TOBACCO PRODUCTS
 :A OF A SALT SOLUTION OF A MULTIVALENT METAL OR OF A SALT SOLUTION
 :A OF A MULTIVALENT ACID, ESPECIALLY THOSE FOUND IN THE HYDRATED
 :A FORM AND THOSE HAVING A LARGE MOLECULAR STRUCTURE.
 :S WLKT (PLANTZ)/GEI/1-19-78 DRAFT APPLICATION RECEIVED--TO INVENTOR
 :S FOR REVIEW

**682 :T EXPANSION OF TOBACCO WITH CARBON DIOXIDE HYDRATE/6-2-75
 :I J. KNIGHT
 :C EXPANSION + CO2
 :D MANUFACTURING CENTER/MISCELLANEOUS AND R&D/APPLIED RESEARCH
 :D FARONE (BECAUSE OF HOELZEL'S INVOLVEMENT)
 :A FORMATION OF CARBON DIOXIDE HYDRATE AS THE AGENT WITHIN TOBACCO
 :A FOR SUBSEQUENT RELEASE OF GAS FOR PUFFING PERMITS OPERATION
 :A AT LOWER PRESSURES THAN WITH LIQUID CO2.
 :S WLKT (KOTHE)/GEI/CASE INDICATED AS HAVING SOME PRIORITY; 1-20-78
 :S FIRST DRAFT RETURNED TO WLKT WITH CORRECTIONS; 1-27-78 INVENTOR-
 :S SHIP DISCUSSED WITH INSKEEP, PALMER, FARONE, HOELZEL

**683 :T PROCESS FOR INCREASING THE FILLING CAPACITY OF TOBACCO/6-5-75
 :I S. DEBRAND
 :C EXPANSION + HEAT + STIFFENING
 :D R&D/APPLIED RESEARCH/FARONE
 :A THIS INVENTION RELATES TO AN INCREASE IN FILLING VALUE (F.V.)
 :A OF VARIOUS GRADES OF TOBACCO SHREDS FROM FLUE-CURED AND BURLEY
 :A TOBACCOS AFTER THEY WERE SUBJECTED TO A STEAM-AIR TREATMENT.
 :A THE OBSERVED INCREASE IN FILLING CAPACITY HAS BEEN ATTRIBUTED
 :A TO STRUCTURAL CHANGES IN THE WATER-INSOLUBLE TOBACCO CARBOHY-
 :A DRATES AND THE SHIFT IN EQUILIBRIUM MOISTURE CONTENT WHICH
 :A HAVE RESULTED IN A STIFFENING OF THE FIBERS. THE INCREASE IN
 :A FILLING VALUE HAS BEEN DETERMINED AS 10% TO 20% AS COMPARED
 :A WITH UNTREATED TOBACCO MAINTAINED UNDER STANDARD CONDITIONS.
 :S WLKT (KOTHE)/GEI/8-22-75 DISCLOSURE SENT TO WLKT; NO DRAFT
 :S RECEIVED IN 9 REPORT INTERVALS

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**697 :T CONTINUOUS PROCESS FOR TOBACCO EXPANSION/9-25-75
 :I A. LENDVAY AND B. SPANN
 :C EXPANSION + OTHER CHEMICAL
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS--TOBACCO PROCESSING/GANNON/BURNS
 :A A CONTINUOUS PROCESS OF EXPANDING TOBACCO WITH CARBON DIOXIDE
 :A AND AMMONIA BY SPRAYING TOBACCO WITH COLD CONCENTRATED
 :A AMMONIUM HYDROXIDE, BLENDING THE SPRAYED TOBACCO ALONE AND
 :A THEN MIXING THE BLENDED TOBACCO WITH GROUND DRY ICE, FOLLOWED
 :A BY EXPANDING THE TOBACCO BY MEANS OF HEAT AND THEREAFTER
 :A EQUILIBRATING THE TOBACCO IS DISCLOSED. CONCENTRATED
 :A AQUEOUS SOLUTIONS OF AMMONIUM CARBAMATE MAY BE SUBSTITUTED FOR
 :A THE AMMONIUM HYDROXIDE AND DRY ICE IN THE PROCESS. THE TOBACCO
 :A MAY BE EXPANDED IN AN ATMOSPHERE OF HOT STEAM OR GAS, OR BY
 :A MEANS OF MICROWAVE OR RADIANT HEAT ENERGY. THE PROCESS ALLOWS
 :A IMPREGNATION AND EXPANSION OF TOBACCO TO BE EFFECTED WITHOUT
 :A INTERRUPTION ON A PRODUCTION LINE.
 :S WLKT (GILLIS)/SAH/1-30-78 SECOND DRAFT RECEIVED--TO INVENTOR AND
 :S MANAGEMENT FOR REVIEW; COMMENTS RECEIVED WHICH MIGHT NECESSITATE
 :S SOME REVISION OF SPECIFICATION
 **727/8 :T TOBACCO EXPANSION WITH GASEOUS CO2/4-15-76
 :I F. UTSCH, R. DE LA BURDE, P. AUMENT
 :C EXPANSION + CO2
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/TOBACCO PROCESSING
 :D GANNON/BURNS
 :A AN IMPROVED PROCESS FOR THE EXPANSION OF TOBACCO IS PROVIDED
 :A WHICH EMPLOYS CARBON DIOXIDE AS THE EXPANSION AGENT IN A
 :A SEQUENCE OF STEPS COMPRISING: (1) CONTACTING TOBACCO WITH
 :A CARBON DIOXIDE GAS AT A PRESSURE OF AT LEAST 2250 PSIG FOR
 :A A TIME SUFFICIENT TO IMPREGNATE THE TOBACCO WITH THE CARBON
 :A DIOXIDE GAS, (2) RELEASING THE PRESSURE AND (3) THEREAFTER
 :A SUBJECTING THE CARBON DIOXIDE-TREATED TOBACCO TO RAPID HEATING
 :A CONDITIONS TO REMOVE THE CARBON DIOXIDE AND THEREBY EXPAND THE
 :A TOBACCO. IN A PREFERRED EMBODIMENT OF THE PRESENT INVENTION,
 :A THE SYSTEM IS COOLED SUFFICIENTLY DURING IMPREGNATION SO THAT
 :A AT LEAST A PORTION OF THE CARBON DIOXIDE GAS IS CONDENSED, WHEN
 :A THE PRESSURE IS RELEASED IN STEP (2).
 :S WLKT/GEI/PRIORITY CASE; ASSOCIATED WITH EARLIER CASES;
 :S 1-27-78 REVISED DRAFT RECEIVED--TO INVENTORS FOR REVIEW;
 :S 1-30-78 DOCUMENTS RELATING TO INVENTORSHIP SENT TO WLKT; 2-8-78
 :S SEARCH OF PM DATA BASE COMPLETED
 **733 :T LOW TEMPERATURE STEAM EXPANSION OF AMMONIUM CARBONATE IMPREG-
 :T NATED FILLER/5-6-76
 :I H. MERRITT AND G. KITE
 :C EXPANSION + HEAT + CO2
 :D R&D/MISCELLANEOUS/CHEMICAL RESEARCH DIVISION/SYNTHESIS OF
 :D TOBACCO ADDITIVES/OSDENE/JOHNSON
 :S WLKT (KOTHE)/GEI/12-8-77 DISCLOSURE HANDED TO KOTHE

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****734** :T EXPANSION WITH AMMONIUM CARBAMATE/5-6-76
 :I F. UTSCH
 :C EXPANSION + OTHER CHEMICAL + HEAT
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/TOBACCO PROCESSING
 :D GANNON/BURNS
 :A A METHOD FOR IMPREGNATING TOBACCO WITH AMMONIA AND CARBON
 :A DIOXIDE PREPARATORY TO HEATING FOR PURPOSES OF EXPANSION.
 :A AMMONIUM CARBAMATE POWDER IS MIXED INTIMATELY WITH SHREDDED
 :A TOBACCO AND BULKED AT AMBIENT TEMPERATURE FOR A PERIOD OF TIME
 :A PRIOR TO A HEATING STEP FOR EXPANDING THE TOBACCO. THE USE OF
 :A AMMONIUM CARBAMATE POWDER ALLOWS IMPREGNATION OF THE TOBACCO
 :A WITH VOLATILES IN SITU WITHOUT UNDULY HEATING THE TOBACCO.
 :A BECAUSE OF THE LACK OF APPRECIABLE EXOTHERMIC HEAT INVOLVED
 :A IN BREAKDOWN OF THE AMMONIUM CARBAMATE, ANY FLAVOR LOSS THAT
 :A MAY RESULT FROM HEATING FOR EXTENDED PERIODS IS AVOIDED.
 :S WLKT (KOTHE)/GMJS/HIGH PRIORITY; 2-3-78 DISCLOSURE SENT TO WLKT
****750** :T IMPROVEMENT OF FILLING POWER OF EXPANDED TOBACCO BY HEAT
 :T TREATMENT/9-16-76
 :I L. SYKES AND H. MERRITT
 :C EXPANSION + POST EXPANSION TREATMENT + HEAT
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/CO2 EXPANSION
 :D GANNON/BURNS
 :A TOBACCO ALREADY EXPANDED BY A RAPID HEATING PROCESS UNDERGOES
 :A FURTHER INCREASE IN (REORDERED) FILLING POWER WHEN IT IS GIVEN
 :A AN ADDITIONAL TREATMENT WITH HOT GAS SUCH AS AIR OR STEAM.
 :A THIS TREATMENT CAN BE LESS DRASTIC (I.E., AT A LOWER TEMPERA-
 :A TURE) THAN THE FIRST EXPANSION STEP, AND THUS CAN BE MORE
 :A EASILY CONTROLLED. THE PRODUCT, WHILE HAVING SUBSTANTIALLY
 :A INCREASED FILLING POWER, IS EQUALLY ACCEPTABLE IN SUBJECTIVE
 :A SMOKING TESTS TO THE PRODUCT WITHOUT POST TREATMENT.
 :S WLKT (KOTHE)/GEI/11-17-77 DISCLOSURE SENT TO WLKT
****773** :T CO2 IMPREGNATION OF FILLER BY RAPID COOLING/4-25-77
 :I R. DE LA BURDE, P. AUMENT, AND F. UTSCH
 :C EXPANSION + CO2
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/TOBACCO PROCESSING
 :D GANNON/BURNS
 :A TOBACCO (CUT FILLER) IS PREPARED FOR SUBSEQUENT EXPANSION TREAT-
 :A MENT, AS BY RAPID HEATING, BY IMPREGNATION WITH GASEOUS CARBON
 :A DIOXIDE AT RELATIVELY LOW PRESSURES, SUCH AS 300 PSIG OR LOWER,
 :A AND RAPID COOLING TO SUCH TEMPERATURE THAT THE GAS IS CONDENSED
 :A AND SOLIDIFIED WITHIN THE TOBACCO. PRESSURE IS RELEASED, AND
 :A THE MATERIAL IS EXPANDED IN A CONVENTIONAL WAY.
 :S WLKT/GEI/11-77 DISCLOSURE SENT TO WLKT
****774** :T EXPANDED, STIFFENED TOBACCO/4-30-77
 :I N. RAINER AND D. SIWIEC
 :C EXPANSION + OTHER CHEMICAL + STIFFENING
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A TOBACCO STEMS, PREFERABLY BURLEY, ARE TREATED WITH A
 :A CONCENTRATED AQUEOUS SOLUTION OF A DIVALENT SALT OF A METAL
 :A SUCH AS CALCIUM, MAGNESIUM, ZINC, OR ALUMINUM. THE CHLORIDE,
 :A ACETATE, OR NITRATE SALTS OR SAID METALS ARE ACCEPTABLE. THE
 :A SALT IMPREGNATED STEMS ARE THEN TREATED WITH A CONCENTRATED
 :A SOLUTION OF HYDROGEN PEROXIDE AND AMMONIA FOLLOWED BY WASHING
 :A AND DRYING. STEMS TREATED ACCORDING TO THIS PROCESS MAINTAIN
 :A THEIR EXPANDED STATE AND HAVE SIGNIFICANTLY INCREASED FILLING
 :A CAPACITY: FOR EXAMPLE, 150-170 CC OF FILLING VOLUME PER 10
 :A GRAMS OF COMBUSTIBLE MATERIAL VERSUS ABOUT 35 CC PER 10 GRAMS FOR
 :A UNTREATED STEMS.
 :S SAH/APPLICATION BEING PREPARED; 10-77 SEARCH COMPLETED

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**775 :T EXPANSION AND/OR FLAVOR ADDITION BY CO2 LIQUID/5-10-77
 :I R. DE LA BURDE AND P. AUMENT
 :C EXPANSION + CO2
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/TOBACCO PROCESSING
 :D GANNON/BURNS
 :S WLKT (KOTHE)/GEI/8-17-77 DISCLOSURE SENT TO WLKT; NO DRAFT
 :S RECEIVED AFTER 3 REPORT INTERVALS
 **781 :T CARBON DIOXIDE EXPANSION VIA DRY ICE--GAS IMPREGNATION/6-27-77
 :I H. MERRITT
 :C EXPANSION + CO2
 :D R&D/MISCELLANEOUS
 :S WLKT (KOTHE)/GEI/12-7-77 DISCLOSURE SENT TO WLKT
 **791 :T EXPANSION PROCESS FOR UNCURED TOBACCO/10-14-77
 :I N. RAINER, G. BOKELMAN, AND J. HEARN
 :C EXPANSION + OTHER CHEMICAL + HEAT + HLC
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A HOMOGENIZED GREEN TOBACCO LEAF AND/OR STEM ARE INCUBATED AT
 :A ABOUT 40 DEGREES C FOR 20 HOURS IN THE PRESENCE OF A FLOW OF
 :A AIR. THE HOMOGENIZED LEAF CURED (HEREINAFTER HLC) IS THEN
 :A TREATED WITH AN ALKALINE HYDROGEN PEROXIDE SOLUTION FOLLOWED BY
 :A WASHING. THE EXPANDED HLC IS ROASTED AT ABOUT 200 DEGREES C
 :A TO ACHIEVE A 5% WEIGHT LOSS. THE RESULTANT HLC HAS A SIGNIFI-
 :A CANTLY INCREASED FILLING CAPACITY, IMPROVED APPEARANCE, AND
 :A SMOKING QUALITIES.
 :S SAH/RELATED TO PM 797 AND 774; 11-77 SEARCH COMPLETED;
 :S APPLICATION BEING PREPARED
 **797 :T PROCESS FOR INCREASING THE FILLING POWER OF TOBACCO STEM MATERIAL
 :T 10-28-77
 :I N. RAINER AND J. HEARN
 :C EXPANSION + OTHER CHEMICAL + HEAT
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A RKS TREATED WITH OZONE FOLLOWED BY TREATMENT WITH ALKALINE
 :A HYDROGEN PEROXIDE TO EFFECT EXPANSION. STEMS ARE THEN ROASTED TO
 :A OBTAIN 3 TO 75 WEIGHT LOSS.
 :S SAH/RELATED TO PM 791 AND 774; SEARCH COMPLETED;
 :S APPLICATION BEING PREPARED
 **814 :T FILLER EXPANSION WITH WATER/2-6-78
 :I P. AUMENT, R. DE LA BURDE, AND F. UTSCH
 :C EXPANSION
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/TOBACCO PROCESSING
 :D GANNON/BURNS
 :A PROCESS FOR INCREASING FILLING POWER OF TOBACCO WITHOUT USING
 :A FOREIGN AGENTS OR EXPENSIVE PROCESSING EQUIPMENT. STEPS
 :A INCLUDE: (1) WETTING OF TOBACCO MORE THAN WHAT IS NORMAL IN
 :A PROCESSING OF TOBACCO FOR CIGARETTES, (2) ALLOWING TOBACCO TO
 :A EQUILIBRATE, (3) RAPIDLY DRYING FILLER TO OV LEVELS BELOW 7%
 :A (PREFERABLY BELOW 3%) TO EXPAND AND STIFFEN FIBER STRUCTURE,
 :A AND (5) REMOISTURIZING THE 'OVERDRIED' CUT TOBACCO TO LEVELS
 :A USEFUL FOR CONVENTIONAL CIGARETTE MAKING.
 :S GEI

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***** INSTRUMENT *****

**756 :T "LITETRONIC" CIGARETTE INSPECTION DEVICE/10-14-76
 :I T. CUMMINS
 :C INSTRUMENT
 :D LOUISVILLE/MANUFACTURING ENGINEERING/MISCELLANEOUS
 :A THE "LITETRONIC" IS AN ELECTRONIC CIGARETTE INSPECTION DEVICE
 :A FOR CIGARETTE PACKING MACHINERY. IT IS DESIGNED TO INSPECT FOR
 :A LOOSE ENDS, MISSING FILTERS, AND MISSING CIGARETTES IN AN
 :A ARRANGED BUNDLE.
 :S AIP/AWAITING REVIEW AT LOUISVILLE ON THE BASIS OF PROTOTYPE
 :S UNIT RECENTLY COMPLETED

**761 :T MICROWAVE MOISTURE METER/12-8-76
 :I T. LASZLO
 :C INSTRUMENT + MOISTURE METER
 :D R&D/MISCELLANEOUS
 :A IMPROVED CONTROL OF CIGARETTE ROD CHARACTERISTICS IS ATTAINED
 :A BY INTEGRATION OF ROD MASS, FIRMNESS AND MOISTURE CONTENT CHARAC-
 :A TERISTICS IN PROVIDING CONTROL SIGNALS TO TOBACCO FEED APPARATUS.
 :A IN A PREFERRED PRACTICE, A SIGNAL PROCESSOR IS PROVIDED WITH
 :A INPUT INDICATION OF ROD FIRMNESS, MASS AND MOISTURE CONTENT AND
 :A IN TURN CONTROLS THE CUSTOMARY TRIMMER KNIFE AT THE CIGARETTE
 :A MAKER INPUT, TOBACCO FEED BEING REGULATED BY A CONTROL SIGNAL
 :A HAVING CHARACTERISTICS IN ONE PART DIRECTLY PROPORTIONAL TO
 :A FIRMNESS, IN ANOTHER PART DIRECTLY PROPORTIONAL TO MOISTURE
 :A CONTENT AND IN A FURTHER PART BOTH DIRECTLY PROPORTIONAL TO
 :A MOISTURE CONTENT AND INVERSELY PROPORTIONAL TO MASS.
 :S WLKT (DALEY)/GMJS/11-2-77 FIRST DRAFT APPLICATION RECEIVED--
 :S TO INVENTOR FOR REVIEW

**765 :T PACKAGE BLANK MEASURING INSTRUMENT/1-19-77
 :I J. BOWLING
 :C INSTRUMENT + PACKAGING
 :D MANUFACTURING ENGINEERING/PASQUINE
 :A ACCURATELY MEASURES CUT AND SCORE LOCATIONS OF FLAT PACKAGE
 :A BLANKS.
 :S WLKT (BRANDT)/GMJS/9-15-77 DISCLOSURE SENT TO WLKT; AWAITING
 :S SEARCH REPORT FROM WLKT
 :T METHOD OF FEEDING MASSED COHERENT MATERIAL/2-3-77
 :I T. LASZLO (RETIRED)
 :C MECHANICAL
 :D MISCELLANEOUS
 :A A METHOD OF FEEDING PARTICULATE OR FIBROUS MASSES THAT ARE
 :A COHERENT IN NATURE. A FEED ROLLER, WHICH IS MADE WITH EVENLY
 :A SPACED PROJECTIONS OF PYRAMID SHAPE, IS POSITIONED AT A FEED
 :A SITE WHERE BRIDGING OF THE MASS OF MATERIAL IS FOUND TO HINDER
 :A THE FLOW OF MATERIAL THROUGH, INTO, OR OUT OF A CONVEYOR OR A
 :A DUCT OPENING. THE SURFACE OF THE FEED ROLLER IS POSITIONED
 :A IN CONTACT WITH THE MASS SO THAT AS THE ROLLER IS TURNED A
 :A GIVEN ANGULAR DISTANCE THE PYRAMIDAL PROJECTIONS ENTER
 :A THE INTERSTICES OF THE BRIDGED MATERIAL, MOVE A PORTION OF IT
 :A IN THE DIRECTION OF ROTATION THUS MOVING IT TO FALL INTO A
 :A DUCT AND/OR ONTO A CONVEYOR.
 :S GMJS/2-6-78 THIRD DRAFT COMPLETED--TO INVENTOR FOR REVIEW

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****770** :T TESTER/3-15-77
 :I L. BARTLAM
 :C INSTRUMENT + ANALYTICAL
 :D R&D/APPLIED RESEARCH/COMPUTER SERVICES/FARONE/CLARK
 :S GMJS/5-25-77 SEARCH COMPLETED; AWAITING MORE INFORMATION
****772** :T RELATIVE HUMIDITY INSTRUMENT/4-5-77
 :I J. NIENOW AND F. SHERWOOD
 :C INSTRUMENT + MOISTURE METER
 :D R&D/TOBACCO SERVICES DIVISION/CIGARETTE AND TOBACCO MEASUREMENT
 :D METHODS/GANNON/OSMALOV
 :A UTILIZES MICROWAVE MOISTURE MEASUREMENT OF NATURAL PRODUCT TO
 :A DETERMINE R.H. OF ENVIRONMENT.
 :S GMJS/9-16-77 SEARCH COMPLETED ON PM DATA BASE
****779** :T MEANS TO MEASURE TOBACCO FIRMNESS ON CIGARETTE MAKER/5-25-77
 :I J. OSMALOV
 :C INSTRUMENT + FIRMNESS OF ROD
 :D R&D/TOBACCO SERVICES DIVISION/GANNON/OSMALOV
 :S WLKT/GMJS
****784** :T CONTROL OF MOISTURE IN TOBACCO DURING CIGARETTE MAKING
 :T 7-25-77
 :I J. OSMALOV
 :C INSTRUMENT + MOISTURE METER
 :D R&D/TOBACCO SERVICES DIVISION/GANNON/OSMALOV
 :A A SYSTEM FOR USING THE OUTPUT OF THE BETA GAUGE IN COMBINATION
 :A WITH THE READINGS OF MOISTURE CONTENT OF FILLER IN THE CIGARETTE
 :A ROD TO CONTROL THE ADDITION OR REMOVAL OF MOISTURE IN THE
 :A PNEUMATIC CONVEYING SYSTEM TO THE MAKER OR BY USING A HAUNI
 :A VIBRO UNIT JUST AHEAD OF THE PNEUMATIC SYSTEM.
 :S WLKT (DALEY)/GMJS/TESTING IN PROGRESS TO DEVELOP DATA NEEDED
 :S FOR PATENT APPLICATION
****798** :T METHOD FOR MEASURING FIRMNESS WHILE SMOKING OF CIGARETTE AND
 :T LENGTH DURING SMOKING OF CIGARETTE/11-1-77
 :I J. NIENOW, L. SHAW, AND C. IRVING
 :C INSTRUMENT--FIRMNESS OF ROD
 :D R&D/TOBACCO SERVICES DIVISION/CIGARETTE AND TOBACCO MEASUREMENT
 :D METHODS/GANNON/OSMALOV
 :A A METHOD FOR MEASURING FIRMNESS OF A CIGARETTE ROD DURING SMOKING
 :A FOR DETERMINING EFFECTS OF INCREASED MOISTURE AND TEMPERATURE ON
 :A FIRMNESS BEHIND THE COAL OF A BURNING CIGARETTE.
 :S GMJS/APPLICATION BEING PREPARED
****802** :T DEVICE FOR MEASURING POROSITY OF PAPER/11-23-77
 :I J. WASHINGTON, G. CROWTHER, AND R. GAUDLITZ
 :C INSTRUMENT + POROSITY
 :D R&D/ENGINEERING SERVICES DIVISION/R&D PROJECT ENGINEERING
 :D THOMSON/MUTTER
 :A OPERATES OVER A WIDE RANGE OF POROSITIES BY COMPUTER MATCHING
 :A TO FIND A COMBINATION OF ORIFICES WHILE PRESSURE IS HELD
 :S GMJS/SEARCH IN PROGRESS
****803** :T RHEOMETER/11-23-77
 :I G. MATHE
 :C INSTRUMENT
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/FILTER AND CIGARETTE
 :D PROCESS DEVELOPMENT/GANNON/MEYER
 :A A SPECIAL CONSTRUCTION PERMITS INCORPORATION OF FOAMING AGENT
 :A INTO POLYMER IN THE RHEOMETER FOR DETERMINATION OF RHEOLOGICAL
 :A PROPERTIES OF THE FOAMED MATERIAL.
 :S GMJS/SEARCH IN PROGRESS

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**804 :T DETECTORS FOR MILPRINT VACUUM EVAPORATED ALUMINUM FOIL/11-30-77
 :I A. LILLY, F. WATSON, P. MARTIN, AND J. PRICE
 :C INSTRUMENT + DETECTOR
 :D R&D/MISCELLANEOUS/PHISICAL RESEARCH DIVISION/TOBACCO PHYSICS
 :D FARONE/LOWITZ
 :A METAL LAYERS OF EXTREME THINNESS, OF THE ORDER OF FIFTY
 :A ANGSTROMS AND GREATER ARE DETECTED BY USE OF MICROWAVE ENERGY
 :A SO PROPAGATED AS TO PERMIT DETERMINATION OF THE PRESENCE OR
 :A ABSENCE OF THE METAL IN A DETECTION ZONE OF LIMITED EXTENT
 :A OUTWARDLY OF THE ISSUANCE LOCATION OF SUCH PROPAGATED ENERGY.
 :A APPARATUS IS PROVIDED FOR PROPAGATING MICROWAVE ENERGY HAVING A
 :A CHARACTERISTIC WHICH CHANGES WITH PROPAGATION DISTANCE FROM A
 :A MAXIMUM VALUE AT THE ENERGY ISSUANCE LOCATION TO A MINIMUM VALUE
 :A FIRST EXHIBITED AT THE OUTWARD END OF THE DETECTION ZONE.
 :S WLKT (DALEY)/GMJS/1-31-78 SECOND DRAFT RECEIVED

 **806 :T EXTRUDER AUTOMATIC ROD CIRCUMFERENCE CONTROL/12-7-77
 :I L. CHAMBERLAIN, T. CUMMINS, AND A. HALL
 :C INSTRUMENT
 :D LOUISVILLE/MANUFACTURING ENGINEERING/MISCELLANEOUS
 :S GMJS/UNDER ADVISEMENT; SEARCH IN PROGRESS

 **809 :T IMPROVED APPARATUS PROVIDING OUTPUT INDICATION OF TOBACCO ROD
 :T FIRMNESS/12-12-77
 :I C. HIGGINS AND F. SHERWOOD
 :C INSTRUMENT + FIRMNESS OF ROD
 :D R&D/ENGINEERING SERVICES DIVISION/R&D PROJECT ENGINEERING
 :D THOMSON/MUTTER
 :S GMJS/IMPROVEMENT ON J. NIENOW PATENT 4033360

***** MICROORGANISMS/ENZYME *****

**790 :T A PROCESS FOR THE IMPROVING OF TOBACCO (ACCELERATED FERMENTATION)
 :T 8-1-77
 :I NOT KNOWN
 :C MICROORGANISMS + REMOVAL OF UNDESIRABLE COMPONENT + DENITRATION
 :D PM EUROPE/FTR/MISCELLANEOUS
 :A A CULTURE OF MICROORGANISMS REQUIRING OXYGEN BUT CAPABLE OF
 :A LIVING ANAEROBICALLY WHILE USING NITRATE AS NUTRIENT, WHICH ARE
 :A BROUGHT TO THEIR EXPONENTIAL GROWTH PHASE UNDER ANAEROBIC
 :A CONDITIONS, ARE MADE TO REACT UNDER LIKE CONDITIONS ON THE
 :A NITRATES, NITRITES, AND OTHER TOBACCO COMPONENTS UNTIL THE
 :A NITRATES AND NITRITES ARE REDUCED TO THE DESIRED LEVEL AND THE
 :A EFFECT OF THE MICROORGANISMS IS THEN STOPPED.
 :S AIP/INFORMATION ONLY; BASED ON ORIGINAL LUXEMBOURG FILING

 **796 :T BIOSYNTHESIS OF A TOBACCO FLAVORANT OR TOBACCO SMOOTHER--
 :T FERMENTED TOBACCO/10-28-77
 :I B. SEMP, D. TENG, AND S. TENHET
 :C MICROORGANISMS + FERMENTATION + FLAVOR
 :D R&D/BIO MATERIALS SCIENCE GROUP/BIOCHEMICAL MODIFICATION
 :D OF TOBACCO/FARONE/TENG
 :A BIOSYNTHESIS OF TOBACCO FERMENTATION FLAVORANTS BY MICRO-
 :A ORGANISMS. ADVANTAGES INCLUDE USE ON UNFERMENTED TOBACCO AND LOW
 :A DELIVERY CIGARETTES. IN ADDITION, IT IS MORE RAPID THAN CONVEN-
 :A TIONAL TOBACCO FERMENTATION PROCEDURES.
 :S SAH

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****800** :T LIPID REMOVAL FROM GREEN TOBACCO/11-10-77
 :I B. SEMP AND D. TENG
 :C ENZYME + REMOVAL OF UNDESIRABLE COMPONENT
 :D R&D/BIO MATERIALS SCIENCE GROUP/GIOCHEMICAL MODIFICATION
 :D OF TOBACCO/FARONE/TENG
 :A GREEN TOBACCO IS TREATED WITH A LIPASE ENZYME TO REMOVE LIPIDS.
 :A THE "GREEN" ODOR IS ELIMINATED AND SMOKING QUALITY IMPROVED.
 :S SAH
****810** :T NITRATE REMOVAL/12-19-77
 :I B. SEMP AND D. TENG
 :C MICROORGANISM + DENITRATION
 :D R&D/BIO MATERIALS SCIENCE GROUP/GIOCHEMICAL MODIFICATION
 :D OF TOBACCO/FARONE/TENG
 :A A PROCESS FOR THE REDUCTION OF THE NITRATE CONTENT OF TOBACCO
 :A BY MICROBIAL TREATMENT IS DISCLOSED. TOBACCO IS SUBJECTED,
 :A UNDER CONTROLLED CONDITIONS, TO THE ACTION OF A MICROORGANISM
 :A EFFECTIVE TO DEGRADE NITRATES THROUGH A BIOCHEMICAL REACTION IN
 :A WHICH MOLECULAR NITROGEN IS ULTIMATELY FORMED. THE PROCESS IS
 :A APPLICABLE FOR BOTH TOBACCO FILLER AND AQUEOUS TOBACCO EXTRACTS.
 :A TOBACCO TREATED IN ACCORDANCE WITH THIS PROCESS, WHEN INCOR-
 :A PORATED INTO A TOBACCO SMOKING PRODUCT, DELIVERS A SIGNIFICANTLY
 :A REDUCED AMOUNT OF NITROGEN OXIDES.
 :S SAH/CONSIDERED PRIORITY BY FARONE; APPLICATION BEING PREPARED

***** TOBACCO TREATMENT (Stem/Leaf) *****

****689** :T CROSS-LINKED SMOKING MATERIAL/7-22-75
 :I G. KERITSIS
 :C TOBACCO TREATMENT + ADDITIVE
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A TO STRENGTHEN AND REDUCE BREAKAGE OF SMOKING MATERIALS,
 :A ESPECIALLY FOAMED OR EXPANDED, TREAT WITH POLYFUNCTIONAL
 :A HYDROXY OR AMINO COMPOUNDS AND POLYCARBOXYLIC ACIDS, ETC.
 :S WLKT (REINISCH)/GEI/COMBINED WITH PM 641
****695** :T UPGRADING TOBACCO STEM MATERIALS/9-22-75
 :I A. LENDVAY
 :C TOBACCO TREATMENT + HEAT + RECONSTITUTED + EXTENDERS
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A TOBACCO STEM MATERIAL (PARTICULARLY THAT FROM BURLEY TOBACCO)
 :A WAS HEAT TREATED, EITHER BEFORE OR AFTER HAVING BEEN EXTRACTED.
 :A THE PH, TEMPERATURE AND LENGTH OF EXPOSURE VARIED ACCORDING
 :A TO THE MODE OF EXTRACTION AND THE INTENDED USE OF THE END
 :A PRODUCT. THE HEAT TREATMENT OF THE STEM MATERIAL WAS
 :A CARRIED OUT, EITHER ALONE OR AFTER HAVING BEEN INCORPORATED
 :A INTO CONVENTIONAL TOBACCO SHEET MATERIAL, AT A TEMPERATURE AND
 :A FOR A TIME SUFFICIENT TO ACHIEVE THE PURPOSE OF UPGRADING.
 :A THE HEAT TREATMENT CAN BE CARRIED OUT BEFORE OR AFTER COATING
 :A THE EXTRACTED MATERIAL WITH CASING. IT WAS FOUND THAT THIS
 :A TREATMENT UPGRADED THE MATERIAL TO REMOVE ITS OBJECTIONABLE
 :A HARSHNESS AND "STEMMY" TASTE IN A TOBACCO SMOKING PRODUCT. IF
 :A THE STEMS WERE TREATED AS DESCRIBED ABOVE, THE UPGRADING WAS
 :A SUFFICIENT TO MAKE IT USABLE TO REPLACE STRIP TOBACCO IN THE
 :A FILLER BLEND.
 :S WLKT (REINISCH)/GEI/6-3-77 REVISED DISCLOSURE SENT TO WLKT;
 :S 1-25-78 COPIES OF DISCLOSURES TO INVENTOR; 2-10-78 FOUR
 :S ADDITIONAL EXAMPLES SENT TO WLKT

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****711** :T DIAMMONIUM PHOSPHATE ADDED TO TOBACCO FILLER TO RETARD CIGARETTE
 :T BURN RATE/11-7-75
 :I W. GEISZLER, JR. AND W. HOPKINS
 :C TOBACCO TREATMENT + ADDITIVE
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/PAPER AND FILLER MODIFICATION
 :D GANNON/MEYER
 :S WLKT (KOTHE)/GMJS/SEE ALSO PM 746; PRIORITY CASE; PRIOR ART
 :S VERY CLOSE; 1-77 DISCLOSURE HANDED TO KOTHE; NO DRAFT RECEIVED
 :S IN 6 REPORT INTERVALS
****739** :T METHOD OF REMOVING SAND, OTHER PARTICLES, AND FOREIGN MATTER
 :T FROM TOBACCO/5-25-76
 :I R. BASS, R. JENKINS, JR., AND R. COMES
 :C TOBACCO TREATMENT + CLEANING
 :D R&D/CHEMICAL RESEARCH DIVISION/NUCLEAR AND RADIOCHEMISTRY
 :D OF SMOKE/OSDENE/JOHNSON
 :A METHOD OF WATER SPRAYING GREEN TOBACCO LEAF WITH CONTROLLED
 :A PRESSURE AND PATTERN, OPTIONALLY WITH SURFACTANT.
 :S SAH/8-5-76 SEARCH COMPLETED; NEW INFORMATION AWAITED FROM 1977
 :S TOBACCO CROP
****746** :T DAP ADDED TO TOBACCO FILLER CONTAINING EXPANDED TOBACCO TO
 :T RAISE TPM/UNIT WEIGHT/7-27-76
 :I W. GEISZLER, JR. AND W. HOPKINS
 :C TOBACCO TREATMENT + ADDITIVE
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/PAPER AND FILLER MODIFICATION
 :D GANNON/MEYER
 :A A METHOD OF CONTROLLING THE TOTAL PARTICULATE MATTER IN CONTENT
 :A OF SMOKE FROM PYROLYSIS OF A SMOKING PRODUCT CONTAINING AT LEAST
 :A ONE INGREDIENT MADE FROM AN EXPANDED NATURAL PRODUCT. EXPANDED
 :A TOBACCO AS AN INGREDIENT OF A SMOKING FILLER MIXTURE IS TREATED
 :A WITH DIAMMONIUM PHOSPHATE IN DIFFERENT CONCENTRATIONS TO YIELD
 :A DIFFERENT AMOUNTS OF TOTAL PARTICULATE MATTER PER CIGARETTE
 :A DELIVERED TO THE SMOKER.
 :S WLKT/GMJS/SEE ALSO PM 711; PRIOR ART VERY CLOSE; 1-10-77
 :S DISCLOSURE SENT TO WLKT; NO DRAFT RECEIVED IN 6 REPORT INTERVALS
****783** :T MOISTURIZING OF EXPANDED TOBACCO BY WATER SPRAY/7-18-77
 :I R. DE LA BURDE, P. AUMENT, AND F. UTSCH
 :C TOBACCO TREATMENT + MOISTENING
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/TOBACCO PROCESSING
 :D GANNON/BURNS
 :A TOBACCO MATERIAL, WHICH HAS BEEN EXPANDED AND IS IN A VERY DRY
 :A STATE, CAN BE REORDERED RAPIDLY AND WITHOUT LOSS OF BULK BY
 :A SUBJECTION TO A FINE MIST WATER SPRAY, CHARACTERIZED BY DROPLET
 :A SIZE BETWEEN 1 AND 120 MICRONS DIAMETER.
 :S WLKT/GEI/2-14-78 DISCLOSURE SENT TO WLKT
****808** :T REDUCTION OF "NO" IN TOBACCO SMOKE AND DENITRATION OF TOBACCO
 :T 12-6-77
 :I G. KERITSIS
 :C TOBACCO TREATMENT + DENITRATION
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A A PROCESS FOR THE REDUCTION OF OXIDES OF NITROGEN IN TOBACCO
 :A SMOKE IS DISCLOSED. TOBACCO WHICH HAS BEEN TREATED TO REMOVE
 :A NITRATES, AND SPECIFICALLY POTASSIUM NITRATE, IS FURTHER TREATED
 :A BY RESTORATION OF THE METALLIC CATIONS, AND ESPECIALLY POTASSIUM
 :A CATIONS TO ABOUT ITS ORIGINAL LEVEL IN THE TOBACCO. NEW AND
 :A IMPROVED TECHNIQUES FOR DENITRATING TOBACCO USING ANION EXCHANGE
 :A RESINS, IONIC MEMBRANE ELECTRODIALYSIS, ELECTROREGENERATING ION
 :A EXCHANGE DEIONIZATION OR DONNAN DIALYSIS ARE DISCLOSED.
 :S SAH

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***** RECONSTITUTED (Tobacco) *****

**662 :T INCORPORATION OF HEAT-TREATED CARBOHYDRATE IN RCB BLEND MATRIX
 :T 1-16-75
 :I R. SELIGMAN AND G. KERITSIS
 :C RECONSTITUTED + EXTENDERS
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A HEAT-TREATED CARBOHYDRATE IS INCORPORATED INTO AN RCB MATRIX
 :A PRIOR TO CASTING TO PRODUCE A SHEET WITH A LOWERED TAR AND
 :A NICOTINE SMOKE.
 :S WLKT (REINISCH)/GEI/12-9-77 THIRD DRAFT APPLICATION RECEIVED--
 :S TO INVENTORS FOR REVIEW; 1-30-78 INVENTORS' COMMENTS RECEIVED
 **690 :T CARBONIZATION OF TOBACCO PRODUCTS/8-1-75
 :I A. LENDVAY AND H. WAKEHAM
 :C RECONSTITUTED + EXTENDERS + HEAT
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A TOBACCO STEM AND/OR STALK MATERIALS WERE THERMALLY TREATED, PUL-
 :A VERIZED, AND ADDED TO A CONVENTIONAL RECONSTITUTED TOBACCO SHEET
 :A IN A MANNER SUCH THAT THE RESULTING CIGARETTE FORMED FROM THE
 :A FILLER THUS FABRICATED HAD REDUCED DELIVERY OF TOTAL PARTICULATE
 :A MATTER IN THE SMOKE AND HAD NO "STEM TASTE" AS IS USUAL WHEN
 :A STEM AND STALK MATERIALS HAVE BEEN USED IN TOBACCO SMOKING
 :A PRODUCTS.
 :S WLKT (REINISCH)/GEI/19-9-77 FIRST DRAFT RECEIVED--TO INVENTORS
 :S FOR REVIEW
 **807 :T IMPROVED FLAVOR FORMULATIONS FOR RECONSTITUTED TOBACCO/12-12-77
 :I F. DAYLOR, JR., H. SPIELBERG, J. SWAIN, AND D. KEEL
 :C RECONSTITUTED + ADDITIVE
 :D R&D/FLAVOR DEVELOPMENT DIVISION/FLAVOR DEVELOPMENT GROUP
 :D GANNON/DAYLOR
 :A CHEMICALS ADDED TO CEL IN THE PAPER MADE RECONSTITUTED TOBACCO
 :A PROCESS, SUCH MIXTURE BEING SATURATED INTO THE BASEWEB SHEET AND
 :A DRIED TO PROVIDE FINISHED RECONSTITUTED TOBACCO SHEET. RELATED
 :A PARTICULARLY TO NEW MATERIALS AND/OR MIXTURES RESULTING IN
 :A SUBJECTIVE IMPROVEMENTS OVER EARLIER TOBACCO RECONSTITUTED SHEET
 :A PERMITTING USE IN TOBACCO BLENDS AT MUCH HIGHER LEVELS (E.G. UP
 :A TO 30%). THE FORMULATIONS CONTAIN DAP, UREA, ISOSWEET, COCO
 :A SHELLS, ST. JOHN'S BREAD, SORBISTAT, TEG OR GLYCERINE, AND
 :A VALERIAN ROOT POWDER.
 :S GEI

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***** PAPER *****

**719 :T POST-TREATMENT OF HUMIC ACID-DYED PAPER/2-6-76
 :C PAPER + STAINING
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/PAPER AND FILTER MODIFICATION
 :D GANNON/MEYER
 :A HUMIC ACID-DYED PAPER SUITABLE FOR USE AS WRAPPERS FOR SMOKING
 :A ARTICLES IS POST TREATED WITH MAGNESIUM SULFATE TO FIX OR RENDER
 :A THE HUMIC ACID INSOLUBLE. PAPER TREATED IN THIS MANNER PROVIDES
 :A A PRODUCT OF ACCEPTABLE BROWN COLOR; AND ON PYROLYSIS, THE AMOUNT
 :A OF CARBON MONOXIDE EVOLVED IS REDUCED OVER THAT OF CURRENTLY
 :A AVAILABLE BROWN PAPERS.
 :S SAH/1-11-78 DRAFT APPLICATION TO INVENTOR FOR REVIEW; COMMENTS
 :S FROM INVENTOR RECEIVED; AWAITING SPECIFIC EXAMPLES FOR INCLUSION
 :S IN SPECIFICATION--MAY NECESSITATE ADDITIONAL WORK BY INVENTOR

**752 :T CIGARETTE DESIGNS/9-23-76
 :I P. GAUVIN
 :C PAPER + DESIGNS ON TIPPING
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/NEW PRODUCT DEVELOPMENT
 :D GANNON/MEYER
 :A DECORATIVE PATTERN APPLIED TO ROD.
 :S GMJS/UNDER ADVISEMENT; POSSIBLE DESIGN APPLICATIONS; MANAGEMENT
 :S DECISION NEEDED

**776 :T AIR PERFORATION/5-11-77
 :I W. MUTTER
 :C PAPER + PERFORATING + TIPPING + ROD
 :D R&D/ENGINEERING SERVICES DIVISION/THOMSON/MUTTER
 :S WLKT (DALEY)/GMJS/10-29-77 SEARCH COMPLETED; AWAITING MACHINE
 :S CONSTRUCTION DETAILS

**792 :T TIPPING PAPER PERFORATION BY ULTRASONIC POWER/10-24-77
 :I G. MATHE, J. NAMESNY, AND A. GERGELY
 :C PAPER + PERFORATING TIPPING
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/FILTER AND CIGARETTE
 :D PROCESS DEVELOPMENT/GANNON/MEYER
 :A VERY HIGH SPEED PERFORATION ACCOMPLISHED BY ULTRASONIC-
 :A POWERED TOOL.
 :S GMJS/2-10-78 SEARCH COMPLETED

**793 :T PAPER SLITTING BY ULTRASONIC POWER/10-24-77
 :I G. MATHE AND J. NAMESNY
 :C PAPER + CUTTING
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/FILTER AND CIGARETTE
 :D PROCESS DEVELOPMENT/GANNON/MEYER
 :A PAPER PASSED BETWEEN GROOVED ROLL AND ULTRASONIC-POWERED TOOL.
 :S GMJS/2-10-78 SEARCH COMPLETED

**811 :T METHOD AND APPARATUS FOR PERFORATING ARTICLES BY LASER/1-20-78
 :I A. LILLY ET AL.
 :C PAPER + PERFORATING
 :D R&D/PHYSICAL RESEARCH DIVISION/TOBACCO PHYSICS/FARONE/LOWITZ
 :A PERFORATIONS ARE MADE AT LOCATIONS SPACED ABOUT THE PERIPHERY
 :A OF A CIGARETTE IN SINGLE ANGULAR DISPOSITION BY CONDUCTING
 :A SEPARATE ANNULAR PARTS OF A RING-SHAPED LASER BEAM THROUGH
 :A RESPECTIVE SEPARATE LIGHT PATHS WHICH INTERSECT SUCH SPACED
 :A PERIPHERAL LOCATIONS.
 :S WLKT (DALEY)/GMJS/1-20-78 DRAFT APPLICATION RECEIVED

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***** MECHANICAL *****

**760 :T EXTRUDATE THREADING SYSTEM FOR EXTRUDING LINES/12-3-76
 :I D. LASLIE
 :C MECHANICAL + EXTRUDER
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/FILTER AND CIGARETTE
 :D PROCESS DEVELOPMENT/GANNON/MEYER
 :S GMJS/AWAITING MORE INFORMATION

**763 :T ZIP TAPE SEPARATOR/1-4-77
 :I R. THATCHER
 :C MECHANICAL SEPARATOR
 :D MANUFACTURING ENGINEERING/PASQUINE
 :A SEPARATES PULL TAPES FROM FILLER RECLAIMED BY CARTON RIPPER/
 :A RECLAIM PROCESS.
 :S WLKT (DALEY)/GMJS/EARLY 1977 DISCLOSURE SENT TO WLKT;
 :S APPLICATION NOW BEING PREPARED; NO DRAFT RECEIVED IN 6 REPORT
 :S INTERVALS

**766 :T METHOD OF FEEDING MASSED COHERENT MATERIAL/2-3-77
 :I T. LASZLO (RETIRED)
 :C MECHANICAL
 :D MISCELLANEOUS
 :A A METHOD OF FEEDING PARTICULATE OR FIBROUS MASSES THAT ARE
 :A COHERENT IN NATURE. A FEED ROLLER, WHICH IS MADE WITH EVENLY
 :A SPACED PROJECTIONS OF PYRAMID SHAPE, IS POSITIONED AT A FEED
 :A SITE WHERE BRIDGING OF THE MASS OF MATERIAL IS FOUND TO HINDER
 :A THE FLOW OF MATERIAL THROUGH, INTO, OR OUT OF A CONVEYOR OR A
 :A DUCT OPENING. THE SURFACE OF THE FEED ROLLER IS POSITIONED
 :A IN CONTACT WITH THE MASS SO THAT AS THE ROLLER IS TURNED A
 :A GIVEN ANGULAR DISTANCE THE PYRAMIDAL PROJECTIONS ENTER
 :A THE INTERSTICES OF THE BRIDGED MATERIAL, MOVE A PORTION OF IT
 :A IN THE DIRECTION OF ROTATION THUS MOVING IT TO FALL INTO A
 :A DUCT AND/OR ONTO A CONVEYOR.
 :S GMJS/2-6-78 THIRD DRAFT COMPLETED--TO INVENTOR FOR REVIEW

**778 :T AERODYNAMIC-VIBRATORY SEPARATOR/5-17-77
 :I R. THATCHER AND H. ODOM
 :C MECHANICAL + SEPARATOR
 :D MANUFACTURING ENGINEERING/PASQUINE
 :A METHOD AND APPARATUS FOR PROCESSING MIXED PARTICULATE MATTER
 :A CONTAINING MATERIALS OF DIFFERENT DENSITY INTO SEPARATE STREAMS
 :A OF LIKE DENSITY MATERIALS.
 :S WLKT (BRANDT)/GMJS/APPLICATION BEING PREPARED

**782 :T TORUS FAN CIGARETTE RIPPER WITH AERO DYNAMIC VIBRATORY SCREEN
 :T SEPARATOR/7-14-77
 :I R. THATCHER AND H. ODOM
 :C MECHANICAL + SEPARATOR
 :D MANUFACTURING ENGINEERING/PASQUINE
 :A A MULTIPLE STAGE SYSTEM FOR SALVAGING TOBACCO FILLER FROM
 :A REJECTED CIGARETTES. THE ADVANCED FEATURES RESULT IN AN
 :A EXCELLENCE OF SEPARATION CAPABILITY FOR REMOVING PAPER AND FILTER
 :A PLUGS FROM THE TOBACCO FILLER. A DRAMATIC REDUCTION IN ENERGY
 :A REQUIREMENTS IS INHERENT IN THIS SYSTEM.
 :S WLKT (BRANDT)/GMJS/APPLICATION BEING PREPARED

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**799 :T METHOD FOR PREVENTING ADHESIVE BLEED THROUGH/11-7-77
:I W. NICHOLS
:C MECHANICAL
:D R&D/NEW CIGARETTE PRODUCTS DIVISION/FILTER AND CIGARETTE
:D PROCESS DEVELOPMENT/GANNON/MEYER
:A MECHANISM RAISES THE PLUGWRAP WHEN MACHINE TURNED OFF,
:A REMOVES FROM CONTACT WITH HOT MELT APPLICATOR.
:S AIP
**813 :T SYSTEM TO PERFORATE TIPPING PAPER WITH CO2 LASER/2-1-78
:I A. LILLY, JR., W. CLAFLIN, E. STULTZ, P. MARTIN, AND L. BROOKS
:C MECHANICAL
:D R&D/MISCELLANEOUS/PHYSICAL RESEARCH DIVISION/TOBACCO PHYSICS
:D FARONE/LOWITZ
:S WLKT (DALEY)/GMJS/1-27-78 DISCLOSURE SENT

***** ELECTRICAL *****

**794 :T MICROWAVE/GAS CHROMATOGRAPHY/10-24-77
:I D. WATSON
:C ELECTRICAL + MICROWAVE
:D R&D/ANALYTICAL DIVISION/GAS CHROMATOGRAPHY SECTION/OSDENE/WILL
:A MICROWAVE SPECTROSCOPY FOR SELECTIVE DETECTION OF COMPONENTS
:A ELUTING FROM A GAS CHROMATOGRAPH.
:S GMJS/RELATED TO PM 795; SEARCH IN PROGRESS
**795 :T MICROWAVE/GAS CHROMATOGRAPHY/10-24-77
:I D. WATSON
:C ELECTRICAL + MICROWAVE
:D R&D/ANALYTICAL DIVISION/GAS CHROMATOGRAPHY SECTION/OSDENE/WILL
:A MICROWAVE ENERGY SOURCE SELECTIVELY VAPORIZED COMPONENTS FOR
:A FURTHER SEPARATION BY GC.
:S GMJS/RELATED TO PM 794; SEARCH IN PROGRESS

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***** SMOKING SUBSTITUTE MATERIALS *****

**622 :T FIBRILLAR CARBONIZED SMOKING ARTICLE/5-15-73
 :I N. RAINER AND D. FULL
 :C SMOKING SUBSTITUTE MATERIALS + CORE MATERIAL
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A A MODIFIED SMOKING PRODUCT IS PROVIDED THAT COMPRISES A GAS
 :A PERMEABLE, SELF-SUPPORTING CENTRAL CORE OF A CARBONIZED MATERIAL
 :A SURROUNDED AND ENVELOPED BY TOBACCO SHREDS AS COMMONLY USED AS
 :A FILLER IN CIGARETTES. THE CARBONIZED CORE HAS A DIAMETER OF
 :A ABOUT 3 TO 6 MM AND IS PREPARED FROM A MULTIFILAMENT STRAND OF A
 :A FIBROUS CELLULOSIC SUBSTANCE, THE INDIVIDUAL FIBERS OF WHICH HAVE
 :A A DIAMETER SMALLER THAN ABOUT 0.2 MM. THE RESULTING SMOKING
 :A PRODUCT IS USEFUL IN THE SAME MANNER AS A CONVENTIONAL CIGARETTE
 :A OR LIKE PRODUCT BUT PROVIDES A REDUCTION IN THE DELIVERY OF
 :A PARTICULATE MATTER RESULTING FROM SMOKING THE PRODUCT AND HAS
 :A THE ADDITIONAL ADVANTAGE OF AFFORDING A LOWER COST OF
 :A CIGARETTE FABRICATION.
 :S WLKT (KOTHE)/GEI/9-30-77 DISCLOSURE SENT TO WLKT WITH PROMISE
 :S OF ADDITIONAL EXAMPLES; 11-15-77 PERTINENT REFERENCES SENT
 :S TO WLKT; 2-14-77 WLKT INSTRUCTED TO PROCEED WITH PREPARATION
 :S OF APPLICATION

**641 :T NONTOBACCO SMOKING MATERIALS/7-26-74
 :I G. KERITSIS
 :C SMOKING SUBSTITUTE MATERIALS
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A A VARIETY OF FORMULATIONS FOR NONTOBACCO SMOKING MATERIALS
 :A IS DISCLOSED. THEY ARE CHARACTERIZED IN GIVING ACCEPTABLE
 :A SMOKE FLAVOR WITH LOW "TAR" DELIVERY.
 :S WLKT (REINISCH)/GEI/1-25-78 CORRECTIONS FOR THIRD DRAFT SENT
 :S TO WLKT; ACKNOWLEDGED BY WLKT 1-30-78

**653 :T EXTRUSION OF SMOKING MATERIALS/11-4-74
 :I G. KERITSIS
 :C SMOKING SUBSTITUTE MATERIALS + EXTRUDE
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A ANY OF A WIDE VARIETY OF EXTRUSION OR OTHER FORMING TECHNIQUES
 :A PRESENTLY IN USE WITH RESINS CAN BE USED TO FORM SHEET OR
 :A FIBROUS PRODUCTS FROM SYNTHETIC SMOKING MATERIALS BASED ON
 :A RESINS. SUITABLE FOR USE AS SUPPLEMENT TO OTHER KERITSIS CASES.
 :S WLKT (REINISCH)/GEI/COMBINED WITH PM 641

**698 :T A SMOKABLE PRODUCT BASED ON HEAT-TREATED CARBOHYDRATES AND
 :T METHOD OF MAKING IT/9-30-75
 :I G. KERITSIS
 :C SMOKING SUBSTITUTE MATERIALS
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A CELLULOSE OR ITS DERIVATIVES OR PLANT MATERIAL IS THERMALLY
 :A DEGRADED TO A WEIGHT LOSS OF 10 TO 90% AND CAST FROM A SLURRY
 :A WITH ADDITIVES OR ADDED TO PAPER.
 :S WLKT (REINISCH)/GEI/COMBINED WITH PM 641

**713 :T TOBACCO REPLACEMENT MATERIAL/11-12-75
 :I G. KERITSIS
 :C SMOKING SUBSTITUTE MATERIALS
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/MODIFIED SMOKING
 :D MATERIALS/GANNON/BURNS
 :A CHITIN OR CHITOSAN AS BASE FOR SUBSTITUTE SMOKING MATERIAL.
 :S WLKT (REINISCH)/GEI/COMBINED WITH PM 641

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